IN THE CLAIMS

Please amend the claims as follows:

1. (original) A method of determining if a received data sequence is a Barker spreaded sequence, the method comprising the steps of correlating said received data sequence, performing a filtering operation to create a data set consisting of the sum of the correlation result of K subsequent data bits, where K is a quality parameter and comprises an integer greater than 1, deriving a parameter L by determining the difference between a maximal correlation result and a minimal correlation result normalized by the minimal correlation result, and comparing the parameter L with a predetermined threshold value to determine if said received signal is a Barker spreaded sequence.

2. (original) A method according to claim 1, wherein the step of correlating the received sequence comprises deriving a signal $y(k$T + n) using the formula:

$$y(kT+n)=\sum_{i=0}^{T-1} b_i^* r(kT+n-i)$$

where b_i^* is the equivalent complex conjugated Barker sequence, $r(k$T = n) is a sampled received data sequence, k =

0,1….., and T is the sampling rate at which the received sequence is sampled prior to application thereof to the correlator.

3. (currently amended) A method according to claim 1 ~~or claim 2~~, wherein the magnitude of $y(kT + n)$ is obtained prior to the step of performing the filtering operation.

4. (currently amended) A method according to ~~any one of the preceding claims~~claim 1, wherein the filtering operation comprises the calculation of a running average of the correlation results, using the formula:

$$\hat{s}_K(n) = \frac{1}{K} \sum_{i=1}^{K} s(iT + n), \text{for } n = 0,..., T-1$$

5. (currently amended) A method according to ~~any one of the preceding claims~~claim 1, wherein L is calculated using the formula:

$$L = \frac{\max_{n} \hat{s}_K(n) - \min_{n} \hat{s}_K(n)}{\min_{n} \hat{s}_K(n)}$$

and a decision signal indicating the presence of a Barker sequence is output if L>**T**, and a decision indicating no Barker sequence is output otherwise, where **T** is a predetermined threshold value.

6. (original) Apparatus for determining if a received data sequence is a Barker spreaded sequence, the apparatus comprises a correlator (12) arranged to correlate said received data sequence, a filter (16) arranged to perform a filtering operation to create a data set consisting of the sum of the correlation result of K subsequent data bits, where K is a quality parameter and comprises an integer greater than 1, a calculator (20) arranged to derive a parameter L by determining the difference between a maximal correlation result and a minimal correlation result normalized by the minimal correlation result, and a comparator (22) arranged to compare the parameter L with a predetermined threshold value to determine if said received signal is a Barker spreaded sequence.

7. (original) A decoder comprising an apparatus according to claim 6.

8. (original) A receiver comprising a decoder according to claim 7.

9. (original) Apparatus arranged to determine if a received data sequence is a Barker spreaded sequence by using the method of claim 1.

10. (original) Decoder comprising an apparatus according to claim 9.

11. (original) Receiver comprising a decoder according to claim 10.

12. (currently amended) A wireless local area network comprising at least one transmitter and at least one receiver according to claim 8~~ or 11~~.